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March 1, 2018

Honorable Kathleen H. Burgess  
Secretary to the Commission  
New York State Public Service Commission  
Three Empire State Plaza  
Albany, NY 12223-1350

Re: Case 15-M-0252 – In the Matter of Utility Energy Efficiency Programs  
Matter 16-02180 – In the Matter of Clean Energy EM&V

Dear Secretary Burgess,

Pursuant to Department of Public Service (DPS) Staff direction relative to the above captioned proceedings, New York State Electric & Gas Corporation ("NYSEG") and Rochester Gas and Electric Corporation ("RG&E") (together, "the Companies") hereby file a Process Evaluation Report for the Companies' Energy Marketplace program. This report contains findings from a process evaluation study conducted by DNV GL of the RG&E Energy Marketplace program.

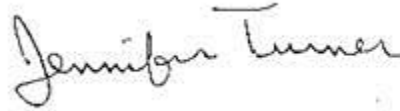
The RG&E Energy Marketplace, named the RG&E Your Energy Savings ("YES") Store, launched as a demonstration project in September 2016. The YES Store is an online portal where RG&E customers can browse, compare, and purchase energy related products with point of sale rebates available on LED lighting, advanced power strips, and Wi-Fi enabled thermostats.

The objective of the DNV GL study was to gain insight regarding customer motivations and barriers to the use of RG&E's YES Store with an aim of increasing awareness of the store and its value to customers and to also gain knowledge for expanding the store to NYSEG customers. The RG&E YES Store will continue to be available through March 31, 2018 under the REV demonstration project. The Companies are in the planning process of continuing the Energy Marketplace at RG&E and expanding it to NYSEG customers in the second quarter of 2018.

A copy of the evaluation report will be made on available on the RG&E website.

Please direct any questions to Carolyn Sweeney at telephone number 585-771-4809 or via email at carolyn\_sweeney@rge.com.

Yours Sincerely,

A handwritten signature in dark ink that reads "Jennifer Turner". The signature is written in a cursive style with a large, stylized "J" and "T".

Jennifer Turner

xc: Christina Palmero  
Kevin Manz  
Thomas Rienzo  
Jeremy Rosenthal



YOUR ENERGY SAVINGS  
**STORE**



# **Rochester Gas & Electric Your Energy Savings Store Evaluation**

**Date: October 31, 2017**

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# 1 EXECUTIVE SUMMARY

This section contains a summary of more detailed findings found elsewhere in this report.





## 1.1 Introduction

This report presents findings from DNV GL's evaluation of Rochester Gas & Electric's (RG&E) Your Energy Savings (YES) Store. RG&E's YES Store is a new online retail marketplace that offers access to discounted energy efficient products. RG&E introduced this offering to customers in August 2016. The store offers customers the convenience of shopping online for energy efficient products such as LED lights, advanced power strips, and smart thermostats. RG&E also offers rebates and has promotions that incentivize customers to adopt the energy efficient products available at the YES Store. This evaluation spans the period from August 2016 to June 2017.

## 1.2 Purpose of the evaluation

The objective of this study is to understand customer motivations and barriers to use of RG&E's YES Store with an aim of using this insight to increase traffic to and purchases at the store. The researchable questions this evaluation seeks to answer include those shown in Table 1.

**Table 1: Key research questions**

	What are the demographics of users of RG&E's YES Store?
	How does store use relate to contact with the utility, use of auto pay, receipt of e-bills, and level of consumption?
	How does YES Store use compare with use of alternatives such as Amazon and large do it yourself (DIY) stores?
	How do product purchase patterns relate to geography?

## 1.3 Approach

This evaluation used a customer survey among users and non-users of RG&E's YES Store combined with energy consumption data, store purchase data, and select utility customer information systems (CIS) data to answer the key research questions.

### 1.3.1 Methods

Primary research among users and non-users of the YES Store uncovered the motivators and barriers related to store use. This was enriched with monthly consumption data, auxiliary variables such as use of automatic bill payment options, contact with the utility, and problems reported to understand what influence these exogenous variables could have on store use.

### 1.3.1.1 Data Sources

The data sources used in this evaluation are summarized below. All of the data provided by RG&E were anonymized prior to sharing with DNV GL for the purposes of this evaluation.

**Transaction data.** Transaction data for approximately 2,800 purchases made at the YES Store included details on products purchased, rebate amount, total amount paid, and zip code to which order is shipped.

**Customer Information Systems (CIS) data.** CIS data for over 180,000 RG&E residential customers included variables that indicate participation in other RG&E energy efficiency programs, use of auto bill pay, receipt of e-bills, customer contact with the utility, reporting of problems, level of electricity and gas consumption, and bill amounts for a 12-month period preceding the start of this evaluation.

**Survey data.** Survey data includes responses from 1,600 respondents who were aware of the YES Store and proceed to take the survey to answer questions related to the YES Store.

## 1.4 Key themes and recommendations from the RG&E YES Store Survey

RG&E engaged DNV GL to conduct an evaluation of customer use of its YES Store. An examination of YES Store use by both program endogenous and exogenous factors provides useful insights on ways to increase traffic to and purchases at the store.

Receipt of email is the main impetus for customer traffic to the YES Store. Purchases at the YES Store are higher among those with higher levels of education, income, and homeownership and lower among older customers. Distinct purchase trends at the YES Store by geography indicate opportunities for geotargeting underserved areas. It is possible that the geographic patterns in YES Store use are confounded with the demographic patterns noted above, in that certain geographies could have a higher proportion of low-income customers. Using demographic and geographic targeting could hence amplify the impact of outreach in cases where there is an overlap.

Electricity consumption and cross-program participation increases as customers move on the spectrum from awareness to consideration to purchase. Customers who fit this profile should be flagged as higher priority targets for YES Store outreach as the likelihood of YES Store use and purchase is higher among this group.

While traditional channels like large DIY stores are still the most dominant, use of RG&E's online marketplace compares favorably with ubiquitous online platforms with higher brand recognition like Amazon, especially given that the YES Store has been in operation for just around a year as of the time of this evaluation.

The key themes and DNV GL's recommendations stemming from the findings from this evaluation are summarized below (Table 2). More detail on these findings can be found in [Section 2](#) of this report.

**Table 2: Key Themes and Recommendations**

Key Theme	Implication	Recommendation
<p>1. <u>Most customers come into site via email</u></p> <p><i>"I depend on your emails to keep me informed what is new! I respect your recommendations and greatly appreciate your incentives to try something out. I hate shopping at big box stores and will always buy online as a first choice. It's great that RG&amp;E has taken the incentive to offer this added-value service to your customers."</i></p>	<p>Emails with a direct link to the YES store makes it easy.</p> <p>Postcards and bill inserts require additional effort from the customer.</p>	<p>Continue with email as the dominant outreach channel for the YES Store.</p> <p>Reduce customer effort required to respond to other channels. For example, a QR code on the bill insert that people can scan with their phone that will take them straight to the site. Track YES Store views by this and other vectors to optimize marketing effectiveness.</p>
<p>2. <u>Purchases at the YES store are higher among customers with higher levels education, income, consumption, and home ownership.</u></p>	<p>Lower-income segments are not as well represented.</p>	<p>RG&amp;E could increase the traffic from this segment by creating a special promotional email that offers increased incentives or product give-aways to customers they have identified in their billing system as low-income or on billing assistance</p>
<p>3. <u>A significant minority (around one-fourth) perceives prices at the YES Store to be high and indicates that the product selection could be better.</u></p> <p><i>"I have unlimited choices from Ebay, Amazon and other online retailers not just what you offer."</i></p> <p><i>"I can find whatever I need at Amazon, and it will show up in two days. It's super convenient."</i></p>	<p>It is unlikely that RG&amp;E can seriously compete on price/inventory with major retailers like Amazon or Home Depot.</p>	<p>Pursue a differentiated model with alternatives to drive traffic/sales. Periodic emails that communicate short term special deals on curated efficiency measures is an approach where RG&amp;E has a better chance to differentiate itself.</p> <p>Undertake a quarterly marketplace review of product prices and use that information to set selection and prices in the YES store to ensure that pricing will be competitive in conjunction with the special deals/promotions.</p>

Key Theme	Implication	Recommendation
4. <a href="#">Different products are purchased by customers in different zip codes.</a>	Some zip codes are more/less likely to purchase certain products.	<p>Increase purchases of products by special email promotions that target customers in specific zip codes</p> <p><a href="#">Develop and track spend metrics to gain a refined understanding of customer engagement with the YES Store.</a></p> <p>Augment CIS data with Nielsen data or similar segmentation data to develop propensity to act/purchase model to support marketing activities for the YES Store.</p>
5. <a href="#">Electricity consumption and cross-program participation increases as customers move on the spectrum from consideration to purchase.</a>	RG&E has internal data it can leverage to identify these higher propensity targets	<p>Identify these customers and regularly send emails to these customers advertising the site.</p> <p>Cross-market the site on RG&amp;E communications to these customers.</p>



## 2 RG&E YES STORE SURVEY

Primary research among YES Store users and non-users helps to reveal the motivation to participate and the variability in customer demographics and behaviors that could potentially lead to these differences in use. With knowledge about specific characteristics that may be prevalent among users and non-users, program designers will be equipped to target groups with messaging that may help customers become aware of the YES Store and improve access and increase traffic to the site.

### 2.1 Survey methodology

This section summarizes the survey mode, design, and sample disposition.

#### 2.1.1 Survey mode and design

The RG&E YES Store survey was a web survey, and the sample frame for the study includes all customers receiving messaging related to the store. Messaging about the YES Store is necessarily limited to those who have access to the web. The choice of a web survey to study customer use of the YES Store is appropriate given that the majority of the outreach about the store is electronic and that this is a web only store. Within this context, a web survey allows us to capture maximum information from a robust sample with minimal additional incremental cost per additional survey. The survey sought to capture data that would provide insight into various aspects related to store use:

- Awareness of RG&E's YES Store
- Channel through which they heard about the YES Store
- Frequency of use
- Motivators of and barriers to store use

- Use of alternatives to the YES Store
- Perception of price and choice at the YES Store
- Perceived gaps
- Consideration of the YES Store for future purchases
- Demographics
- Dwelling characteristics

### 2.1.2 Sample disposition

DNV GL fielded the online survey from May 20, 2017 to July 11, 2017. All customers who received messaging about the store and who were not on the RG&E's do-not-contact list were included in the final survey sample frame and eligible to take the survey. While no incentives for completion were offered to those who were invited to take the survey, respondents were reminded via email and encouraged to complete the survey. The survey was attempted by 2,916 respondents of whom 1,601 respondents (55%) indicated awareness of RG&E's YES Store. Respondents who were aware of the YES Store proceeded to complete the survey and unaware respondents were ineligible to take the survey and screened out. The survey disposition is summarized below (Table 3).

**Table 3: Survey disposition**

	Total
Email invites	148,934
Eligible completes <sup>1</sup>	1601
Final response rate	1.1%

## 2.2 Survey Findings

This section summarizes findings from the RG&E YES Store survey.

### 2.2.1 Customer Profile

We examined the survey sample on key demographic characteristics and compared against statewide statistics for New York. The target audience for the store and the survey is a subset of the general population with access and inclination to use the web and is hence likely to be demographically different as summarized below (Table 4). Compared to the general population of New York state, the sample for the RG&E YES Store Survey is:

- relatively older
- more educated
- has a higher income
- has higher rates of home-ownership.

<sup>1</sup> Eligible completes are respondents who said they had heard of RG&E's YES Store (n=1,601). The remaining 1,315 out of 2,916 respondents were screened out of the survey due to lack of awareness of RG&E's YES Store.

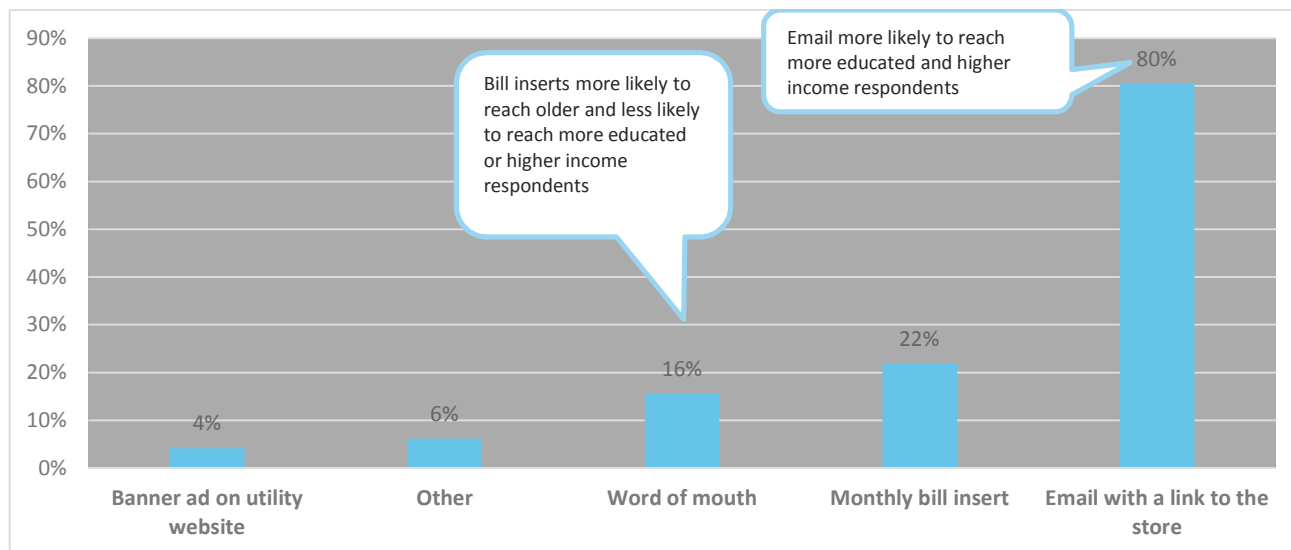
**Table 4: Customer profile**

Demographics	NY State – Census 2016 estimates <sup>2</sup>	RG&E <sup>3</sup>	NYSEG <sup>4</sup>	RG&E YES Store Survey (n=1601)
<b>Age - Persons 65 years and over</b>	15.4%	16.7%	17.1%	39.1%
<b>Education</b>				
<b>High school graduate or higher</b>	85.6%	78.6%	88.6%	94.1%
<b>Bachelor's degree or higher</b>	34.2%	21.6%	33.6%	54.9%
<b>Median Household Income</b>	\$59,269	\$55,268	\$54,689	\$75,000 - \$100,000 <sup>5</sup>
<b>Home-ownership<sup>6</sup></b>	64.5%	59.6%	60.0%	88.5%

### 2.2.2 Awareness of the YES Store

Respondents were asked how they learned about RG&E's YES Store (n=1601). Sources of awareness indicated by most aware respondents was receipt of an email with a link to the store (Figure 1).

**Figure 1: Sources of YES Store awareness**



<sup>2</sup> <https://www.census.gov/quickfacts/NY>

<sup>3</sup> Rochester metropolitan area demographics listed for RG&E. Population demographics for RG&E service territory are unavailable.

<sup>4</sup> NYSEG demographics listed here are broader than just NYSEG's service area and represent all counties north of New York City. Population demographics for NYSEG service territory are unavailable.

<sup>5</sup> Income is captured as a categorical response in the survey. The median (50% percentile) falls in the \$75,000-\$100,000 response category.

<sup>6</sup> <http://eyeonhousing.org/2015/03/vacancy-and-homeownership-rates-by-state-2014/>

An analysis of sources of YES Store awareness by demographics reveals the following differences.

**Age.** While sources of awareness do not differ significantly by age of the respondents for most channels, mention of bill inserts increases as respondent age increases with twice as many respondents aged 55 years and above mentioning bill inserts compared to respondents aged 34 years or less at 23% versus 12% respectively.

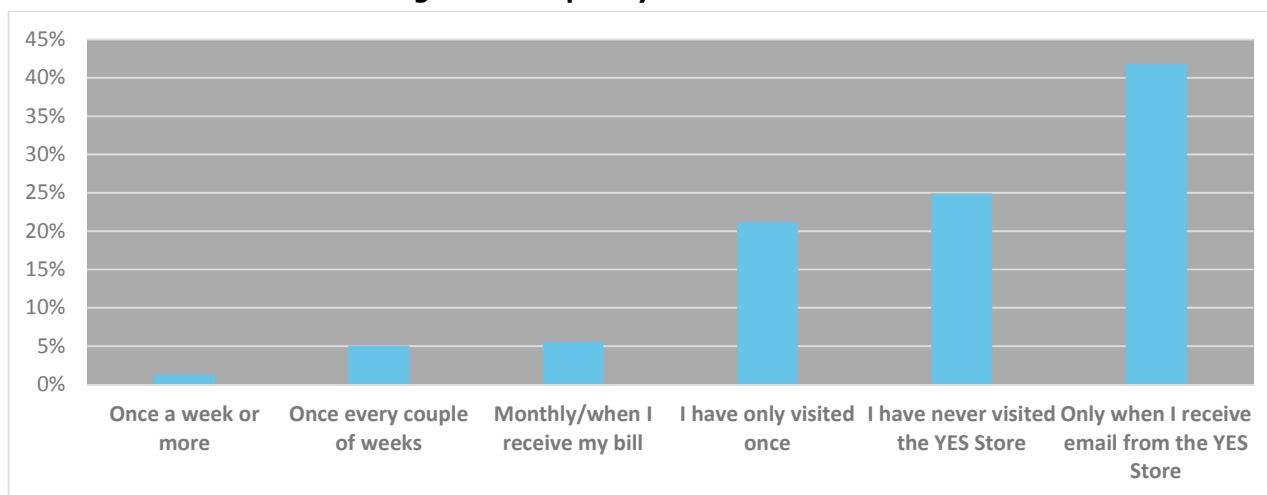
**Education.** We observe a difference in the opposite direction in mentions of bill inserts by level of education with respondents with a post-graduate degree mentioning it half as much as respondents with a high-school education or less at 15% versus 30%. Respondents with higher levels of education also mention receiving an email with a link to the store at significantly higher rates at 84% and 87% for respondents with undergraduate degrees and post-graduate degrees versus 75% for those with a high-school education or less.

**Income.** Similar to education, we observe an inverse relationship between mentions of bill inserts with level of income with respondents with annual household incomes of \$75,000 and higher mentioning it significantly less than respondents with annual household incomes of \$35,000 and lower at 17% versus 26%. Respondents with higher levels of income also mention receiving an email with a link to the store at significantly higher rates at 87% for respondents with incomes of \$75,000 and higher versus 73% for those with annual household incomes of \$35,000 and lower.

### 2.2.3 Frequency of YES Store visits

Respondents who were aware of the store were asked to indicate how often they visited the YES Store (n=1601, Figure 2). Around two-fifths of all aware respondents indicated that they visited the store when they received email messages from the YES Store. One quarter of all aware respondents had never visited the store and one-fifth indicated that they had only visited the site once. These findings suggest that use of the YES Store is in major part a response to the stimulus of receipt of an email from the store and that minimal traffic currently is customer driven without the external stimulus of an email.

**Figure 2: Frequency of YES Store visits**



Additionally, there are clear demographic patterns to frequency of YES Store visits.

**Age.** Respondents aged less than 55 years indicate that they visit the store only upon receipt of an email from the store at a significantly lower rate than older respondents aged over 55 years at 33% versus 46% respectively.

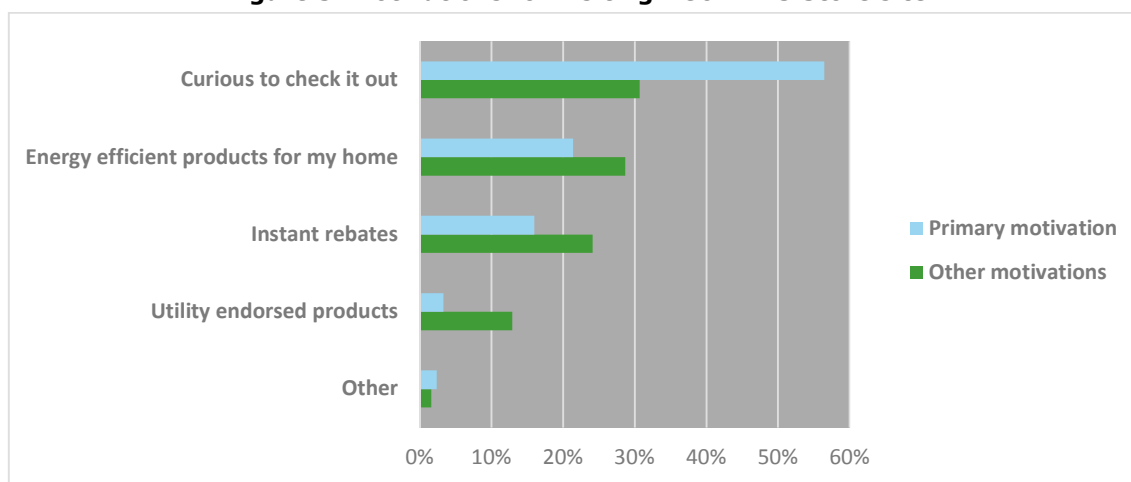
**Education.** Respondents with a college degree or higher state that they have never visited the store at significantly lower rates than those with less than a college degree education at 19% versus 27% respectively.

**Income.** Respondents with annual household incomes of \$75,000 or more stated that they visited the YES Store site a few times a week to a few times a month significantly more frequently than those with incomes less than \$75,000 at 10% versus 6% respectively. Conversely, those with incomes over \$75,000 also stated in much lower proportions than those with incomes under \$75,000 that they had never visited the site at 17% versus 25% respectively.

## 2.2.4 Primary and other motivations for visiting RG&E YES Store site

Respondents who visited the YES store were asked about their motivations for visiting the site (n=1201). Over half of all respondents (56%) indicated that their primary reason to visit the RG&E YES Store was curiosity. The desire to make their home energy efficient with products from the YES Store (21%) and accessing instant rebates offered on products at checkout (16%) round out the top three primary motivators of store visits (Figure 3).

**Figure 3: Motivations for visiting RG&E YES Store site**



We contrast the primary motivations of those who indicate that they visit the site whenever they receive emails from the YES Store with those who report that they have visited the site just once (Table 5). Those who respond to emails from the YES Store have significantly higher mentions of specific motivations such as rebates and making their home energy efficient. Those who visited just once are significantly higher on a general curiosity but have relatively lower specific motivations pulling them back.

**Table 5: Primary motivation by frequency of YES Store visits**

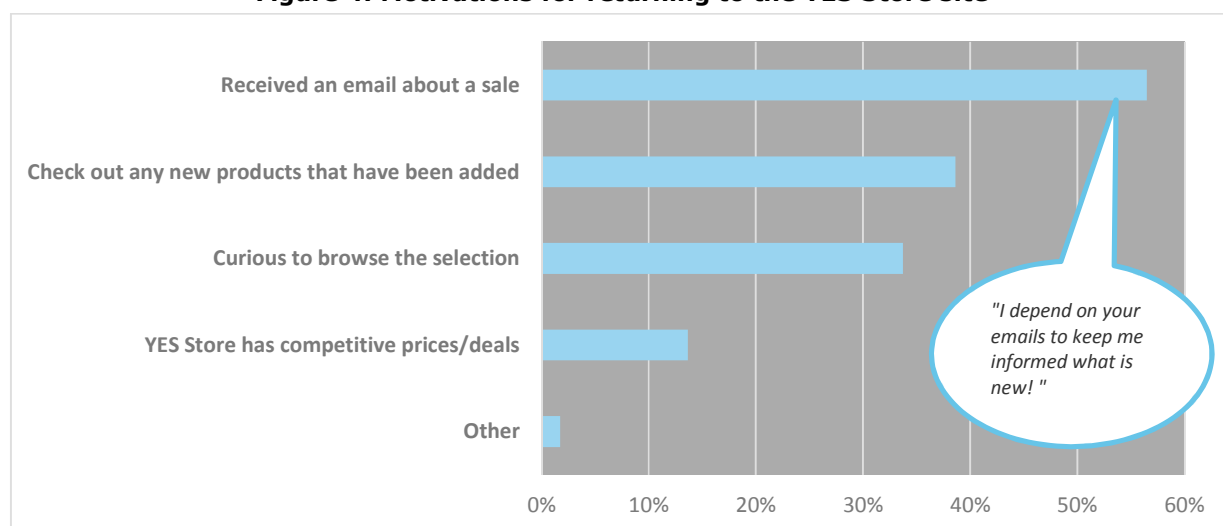
Primary motivation	Visit when I receive emails from YES Store (n=669)	Have visited only once (n=341)
Instant rebates at checkout	18%	9%
Utility endorsed products	3%	4%

To make home energy efficient	24%	15%
Curious to check it out	53%	70%
Other	2%	3%

### 2.2.5 Motivation for returning to the RG&E YES Store site

Respondents who indicated that they had visited the YES Store more than once were also asked about their motivation for returning to the store site (n=857, Figure 4). While over half of all respondents indicated that they returned to the site in response to receipt of an email about a sale (56%), over one-third of all respondents indicated that they were spurred to visit to check out if any new products were added (39%) or because they were curious to browse the selection (34%).

**Figure 4: Motivations for returning to the YES Store site**



### 2.2.6 Purchase channels

Respondents were asked to indicate where they purchased products such as lights, smart thermostats, water saving devices, advanced power strips, and smart home devices in the last year. The response options for each of these products included the following purchase channels - YES Store, large DIY hardware stores, local hardware store, Amazon, other online retailers – and respondents could indicate purchasing the product under consideration at any number of retailers, be it just one or multiple retailers, or that they had not purchased the product in the previous year.

The table below summarizes purchase channels used in the last year by age group among homeowners aware of the YES Store (Table 6). We note that large DIY stores are still the most mentioned across all purchase channels. Use of RG&E YES Store is mentioned second most often but this is still significantly lower than the current default choice of large DIY stores at 27% versus 64%.

Despite the majority of the sample being respondents aged 55 years or more, we see some significant differences by age group in purchase channels mentioned for products such as lights, thermostats, water saving devices, advanced power strips, and smart home devices. Significantly lower proportion of respondents aged 55 years and above mentioned purchasing products at the YES Store than respondents aged 18 to 35 years and 35 to 54 years at 25% versus 40% and 32% respectively. We see a similar pattern with respect to Amazon use. Conversely, large DIY stores are mentioned in significantly higher proportions

by respondents aged 35 to 54 years and 55 years or more relative to those aged 18 to 35 years at 65% versus 47% respectively.

Findings corroborate previous research related to the digital divide that is a barrier for older consumers and the ease with which millennials/digital natives navigate technology and use the web to access the value they seek.

**Table 6: Purchase channel used in the last year by age group**

Purchase channel	All homeowners (n=1357)	18-34 years (n=53)	35-54 years (n=331)	55 years and above (n=973)
		A	B	C <sup>7</sup>
Large DIY store	64%	47%	65%	65% <sup>A</sup>
RG&E YES Store	27%	40%	32%	25% <sup>AB</sup>
Amazon	20%	28%	34%	15% <sup>A</sup>
Other online retailer	14%	19%	17%	13%
Local hardware store	13%	15%	14%	12%

The retail market is highly competitive and difficult to do well. In particular, RG&E's YES store is competing with extremely large, well-established online (Amazon) and brick-and-mortar (Home Depot) retailers that dominate their respective markets. RG&E is unlikely to be able to compete directly with these other retailers. Instead, it should look for another way to differentiate itself. Customer quotes from the surveys that echo this sentiment included:

- "Consumer goods retail is a highly competitive space that requires considerable expertise to be successful. It troubles me that you are spending some of my monthly energy payments to fund this experiment."
- "I have unlimited choices from Ebay, Amazon and other online retailers not just what you offer."
- "I can find whatever I need at Amazon, and it will show up in two days. It's super convenient."
- "I would rather just see a website for getting a rebate no matter where I shop since you don't meet Amazon price and or offer installment payments on larger purchases like site such as HSN or QVC."

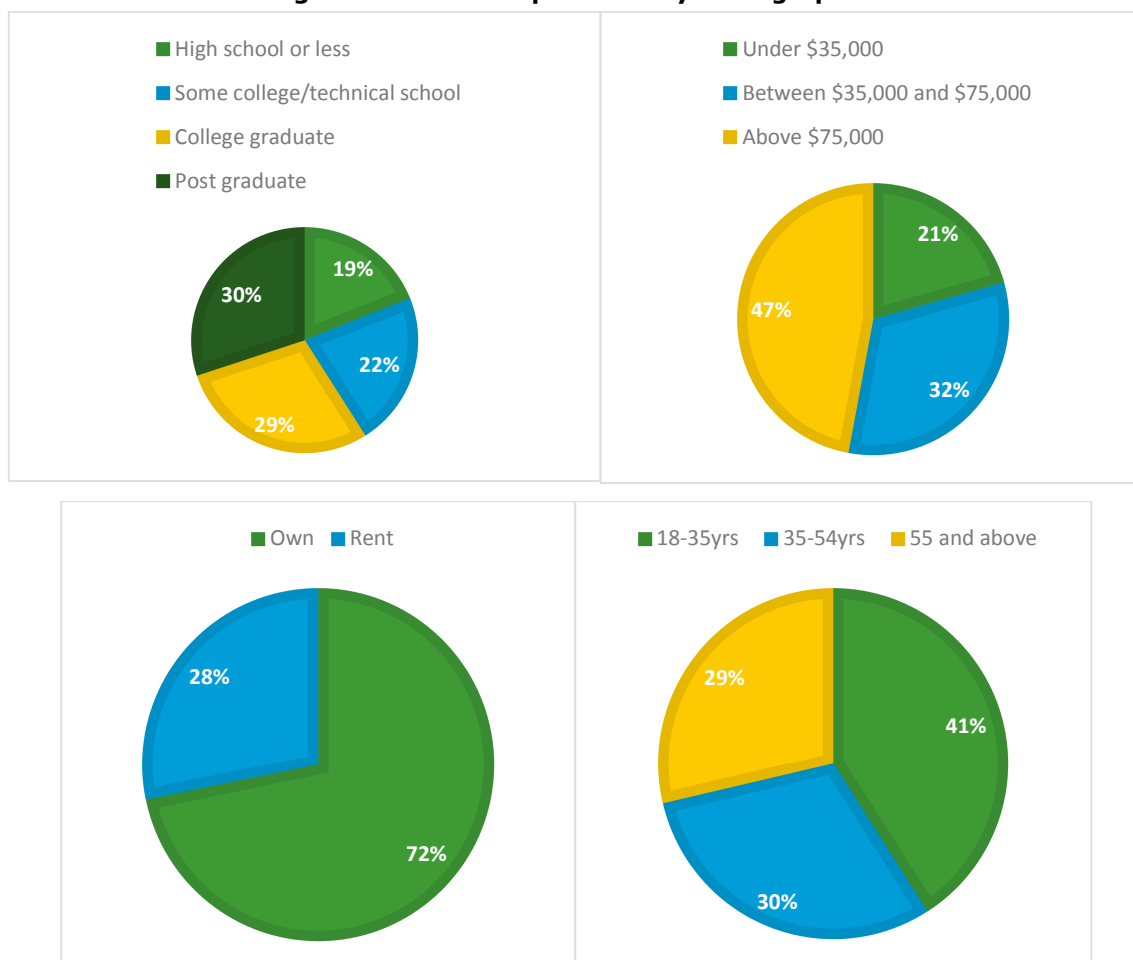
### 2.2.7 YES Store purchases by demographics

Nearly one-fourth (24%) of respondents indicated that they had made a purchase at the YES Store<sup>8</sup>. An analysis of purchases at the store by demographics reveals interesting trends. On average, purchases at the YES Store are higher among those with higher levels of education, income, and homeownership and lower among older customers (Figure 5).

<sup>7</sup> Superscripts A and B in this table denote significant differences between respondents 55 years and above (column labeled C) with respondents aged 18 to 35 years (column labeled A) and respondents aged 35 to 54 years (column labeled B) in terms of use of that channel in the past year.

<sup>8</sup> Self-reported purchase from survey responses of 1202 out of 1601 aware respondents who had visited the YES Store at least once. 399 respondents indicated they had never visited the site.

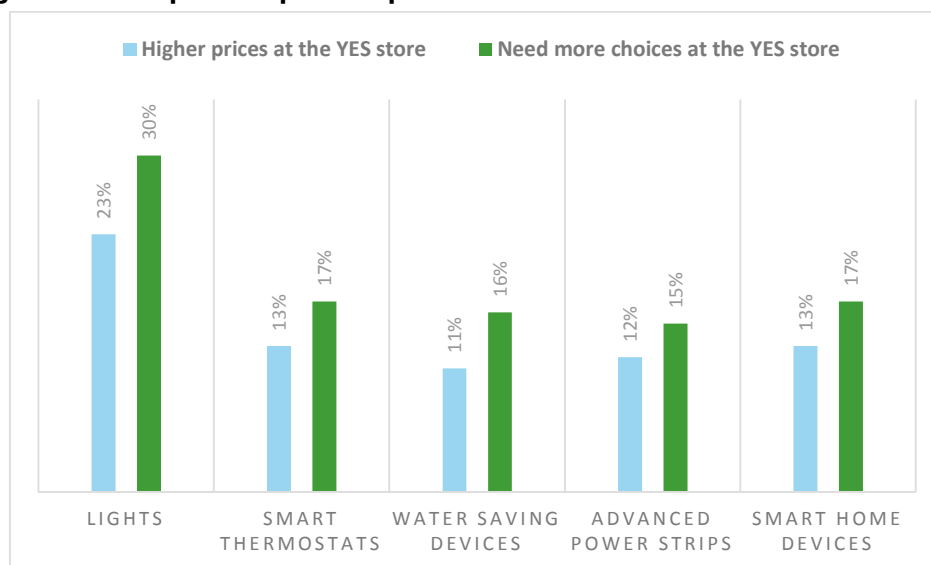
**Figure 5: YES Store purchase by demographics**



#### 2.2.7.1 Perception of price and choice at the YES Store

Respondents who had visited the YES Store were asked to indicate their perception of product price and selection available at the YES Store (n=1201). Lighting seemed to be the product category that respondents perceived to be the least competitive at the YES Store in terms of price and selection with nearly one-fourth (23%) indicating that the prices of lights were higher at the YES Store and nearly one-third (30%) indicating that the YES Store needed to offer more lighting choices (Figure 6).

**Figure 6: Perception of product price and selection available at the YES Store**



An analysis of store transactions shows that lighting products are the majority of all transactions and well over double or more the transactions for other products like thermostats and power strips. That nearly one-quarter of respondents perceived prices of lighting products to be higher at the YES Store is especially important given this fact that the majority of transactions at the YES Store are for lighting.

DNV GL coded 234 open-ended responses to a question about what products customers would like to see added to the YES store. These responses did not provide a clear picture regarding additional products that customers would like to see. Approximately half of the answers indicated no additional products or otherwise did not offer product suggestions. The other half of answers were distributed among a wide variety of other products (Table 7).

**Table 7. Other Products to Include in YES Store**

Requested Product	Percent of customers (n=234)
More smart/wifi devices	6.0%
LEDs with more features	4.3%
More brands/variety	3.0%
Renewable energy systems / products	2.6%
Security Cameras / Alarms / Detectors	2.6%
Furnace filters	1.7%
Lighting	1.7%
Non-smart devices	1.7%
Water heater / peripherals	1.7%
Energy tracking products	1.3%
High lumen LEDs	0.9%
Higher quality items	0.9%
HVAC	0.9%
Outdoor lighting	0.9%

Requested Product	Percent of customers (n=234)
Appliances	0.4%
Battery backup; Renewables; Appliances; HVAC	0.4%
Building shell, insulation, and passive efficiency measures	0.4%
Energy tracking products; Outdoor lighting	0.4%
Fans; Outdoor lighting	0.4%
LED night lights	0.4%
Lower lumen bulbs	0.4%
Measures not available at Home Depot	0.4%
Power outage items	0.4%
Renewable energy systems / products; Water Heaters; Insulation	0.4%
Thermostat	0.4%
Tubular LEDs	0.4%
Tubular LEDs; Security Cameras / Alarms / Detectors	0.4%
Other	9.0%
Don't know	5.1%

### 2.2.8 Awareness, consideration, and purchase – “broad” data profile

Respondents who had visited the YES Store and had not made a purchase were asked if they would consider making purchases at the YES Store. An analysis of visits, purchase, and consideration of future purchase at the YES Store by consumption, CIS data, and other demographics reveals interesting trends (Table 8).

**Table 8: Visit, consideration, and purchase – “broad” data profile**

	Not visited YES Store (n=397)	Would not consider purchase (n=314)	Would consider purchase (n=594)	Made a purchase at YES Store (n=296)
<b>CIS data</b>				
On auto bill pay	33%	33%	32%	36%
Receive electronic bills	58%	57%	60%	63%
Have contacted the utility	2.4	2.1	2.6	2.4
Have reported problems	2%	1%	1%	2%
<b>Cross-program participation</b>				
RG&E Energy Saver program	21%	26%	30%	33%
RG&E Gas program	8%	11%	11%	13%
<b>Consumption</b>				
Total annual electricity consumption (kWh)	6,834	7,264	7,364	8,019
Total annual gas consumption (therm)	651	644	645	618
Total bill amount (\$)	1,261	1,306	1,296	1,325
<b>Demographics</b>				
Homeownership	83%	89%	89%	95%
College graduate or higher	53%	52%	59%	67%
Age less than 55 years	17%	11%	15%	16%
Number of bedrooms >= 3	74%	75%	77%	84%
Household income > \$75,000	23%	22%	35%	39%

As we move along the consideration to purchase spectrum, we note that electricity consumption, homeownership, prevalence of higher educated customers, and higher income customers increases and gas consumption decreases. Additionally, cross-program participation in the Energy Saver program and the Residential Gas program is significantly higher among those who made a purchase at the YES Store relative to those who have not visited the YES Store. This suggests that cross-selling or promoting the YES Store among participants of other programs could increase traffic to the store.

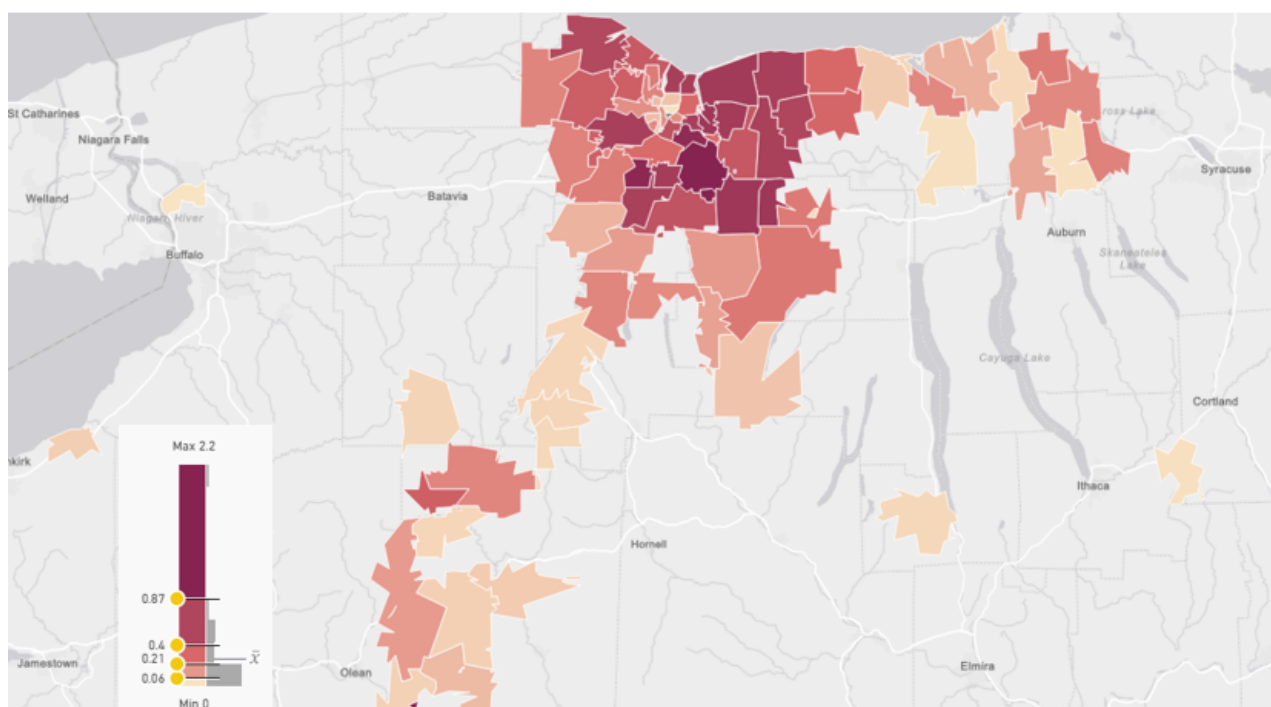
### 2.2.9 Purchase trends by geography

An analysis of spend at the YES Store by geography reveals distinct patterns with certain areas contributing to maximum spend at the store (Figure 7). This analysis examines spend, total and by product category, normalized by the number of households to get a true measure of the level of participation that is not confounded by areas with higher population density. Additional maps that summarize spend by product category are included in the [Appendix](#). Summarized below are some insights from this geospatial analysis:

- Lighting purchases have the largest geographic footprint and are dispersed across several zip codes in RG&E's territory.
- Smart device purchases have the smallest geographic footprint and are tightly clustered around Rochester area in RG&E's North Central territory.
- While there are variations in the zip codes that have higher spend based on the products under consideration, there are some zip codes that consistently have low participation across all product categories.

This suggests an opportunity for geo-targeted outreach combined with tailored messaging by demographic segments which could be effective in increasing traffic to the store.

**Figure 7: Geographic trends in YES Store purchases – Total**



### 2.2.9.1 Spend metrics

Table 9 presents a snapshot of spend by zip code and metrics that capture the level and type of customer engagement at the YES Store by geography. While orders at the YES Store span nearly 90 zip codes, the summary below highlights the 5 zip codes with high, medium, and low levels of spend respectively. Total expenditures at the YES Store range from \$13,539 in zip code 14580 with 274 orders to lows of \$6 in zip codes 13053, 13166, and 14433 with just 1 order. Factors like population density, number of orders, and affluence level have a bearing on the total amount spent at the store by zip code and hence we consider metrics that examine spend relative to these.

Developing metrics such as the ones shown below and tracking these will equip the program with refined information on customer engagement and help answer questions such as: 1) Where is overall spend leading or lagging? 2) Where are orders higher or lower on average? 3) Are certain areas leading or lagging in terms of the energy savings potential of their purchases?

For example, while zip code 14450 is among the 5 zip codes with the highest spend, it has relatively lower spend given the number of households in that zip code. The estimated savings associated with orders is useful to track as well. For example: While zip 14534 has the second highest total spend, estimated kWh saved per dollar spent at the store is lower. This signals an opportunity to promote measures that yield higher savings in an area that has relatively higher use of the store for improved program performance.

**Table 9: Spend metrics by geography**

Zip code	Number of Households	Median home price	# orders	Spend	kWh savings estimated	Spend/ household	kWh saved/spend	Spend/ order
14580	21,216	\$199,700	274	\$13,539	56,331	\$0.64	4.16	\$49.41
14534	12,740	\$266,400	216	\$11,612	37,308	\$0.91	3.21	\$53.76
14624	14,473	\$140,000	170	\$7,358	30,827	\$0.51	4.19	\$43.28
14618	8,586	\$208,700	128	\$6,744	24,036	\$0.79	3.56	\$52.69
14450	17,467	\$209,800	78	\$5,567	17,313	\$0.32	3.11	\$71.37
14589	3,353	\$122,800	23	\$793	6,320	\$0.24	7.97	\$34.48
14445	3,676	\$118,700	22	\$755	3,411	\$0.21	4.52	\$34.32
14619	6,337	\$83,100	13	\$753	2,653	\$0.12	3.52	\$57.92
14514	2,636	\$171,100	8	\$683	1,394	\$0.26	2.04	\$85.38
14608	6,115	\$82,100	18	\$600	3,393	\$0.10	5.65	\$33.33
13053	1,981	\$163,100	1	\$6	192	\$0.00	31.94	\$6.00
13166	2,369	\$113,300	1	\$6	192	\$0.00	31.94	\$6.00
14433	1,797	\$69,600	1	\$6	192	\$0.00	31.94	\$6.00
14836	533		1	\$6	192	\$0.01	31.94	\$6.00
14504	833		1	\$6	192	\$0.01	31.94	\$6.00

### 2.2.10 Energy consumption and purchases at the YES Store

Energy efficiency programs often target customers based on their level of consumption in order to direct their efforts towards customer segments where cost-benefit ratios for the program are more favorable. We examined total spending at the YES Store by customers' level of energy consumption to understand the nature of the relationship, if any, between them (Figure 8). We note that purchases are significantly higher among the top consumption group at up to 1.5 times the purchases made by lower consumption groups. There is potential for more informed targeting by monitoring participation and purchase trends at the YES Store by customers' level of consumption.

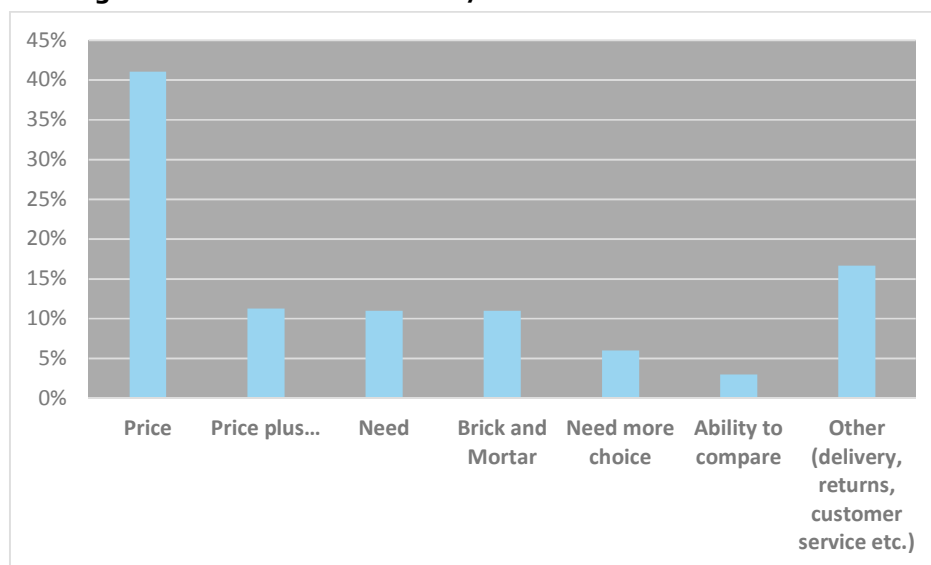
**Figure 8: Total spend at the RG&E YES Store by energy consumption**



### 2.2.11 Reasons for YES Store non-use/consideration among non-purchasers

Respondents who said they would not consider purchasing products from RG&E's YES Store were asked for reasons why. A thematic analysis of the verbatims reveals that over 40% of respondents indicated that they did not perceive the price of products on the site to be competitive with other alternatives and an additional 11% indicated compound reasons which included price. Around one-tenth indicated that they preferred to shop at brick and mortar stores where they could touch and feel the products and another one-tenth indicated that they had no need for products from the store (Figure 9).

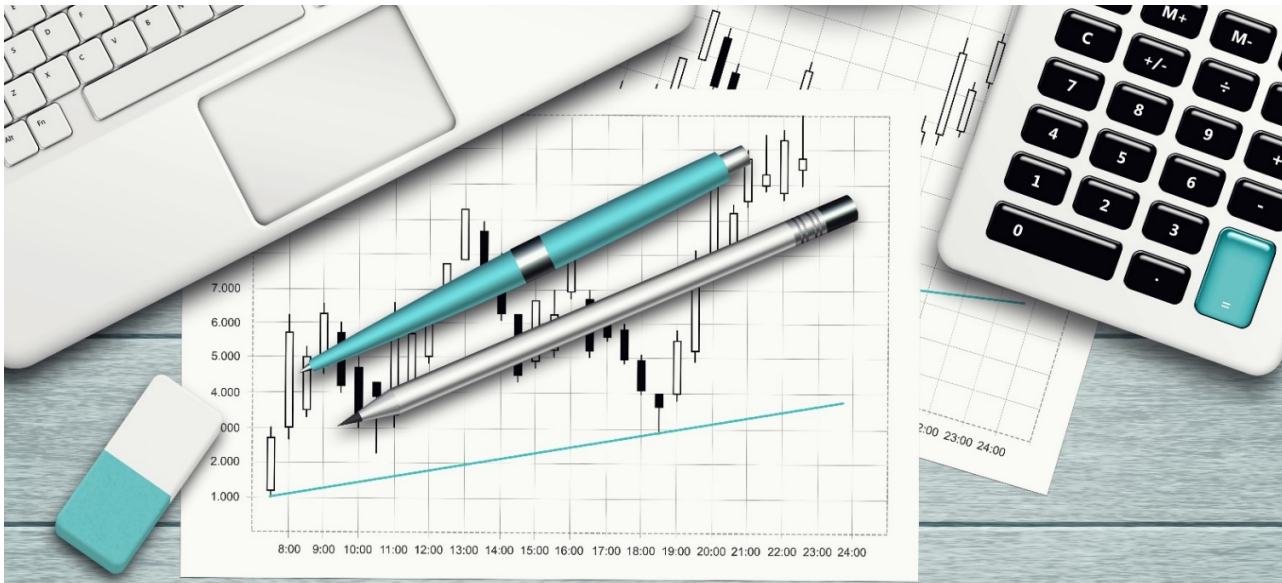
**Figure 9: Reasons for non-use/consideration of the YES Store**



Illustrative customer quotes of reasons for not revisiting RG&E's YES Store are provided in Table 10.

**Table 10. Illustrative Customer Quotes for Reasons for not Revisiting YES Store**

Reason	Customer Quote
Price	"Products not competitively priced even with offered discount"
Price plus...	"I believe I can get better deals and more selection of products elsewhere."
Need	"I do not need energy saving products at this time."
Brick and Mortar	"Not really interested...if we need a product that helps save energy, most likely to search retail stores, not RG&E site."
Need more choice	"Didn't see a wide range of products, and prices were not very competitive."
Ability to compare	"I never thought to buy from this store because I do my own research on energy efficient products."
Other	"I don't trust RG&E to save me money" "Did not know there was more to view. Thought the LEDs were all there was."



### 3 CONCLUSIONS & RECOMMENDATIONS

RG&E engaged DNV GL to conduct an evaluation of customer use of its YES Store. An examination of YES Store use by both program endogenous and exogenous factors provides useful insights on ways to increase traffic to and purchases at the store.

Receipt of email is the main impetus for customer traffic to the YES Store and this finding supports continuing with email as the dominant outreach channel. Purchases at the YES Store are higher among those with higher levels of education, income, and homeownership and lower among older customers. Distinct purchase trends at the YES Store by geography indicate opportunities for geotargeting underserved areas. It is possible that the geographic patterns in YES Store use are confounded with the demographic patterns noted above, in that certain geographies could have a higher proportion of low-income customers. Using demographic and geographic targeting could hence amplify the impact of outreach in cases where there is an overlap.

Electricity consumption and cross-program participation increases as customers move on the spectrum from awareness to consideration to purchase. Customers who fit this profile should be flagged as higher priority targets for YES Store outreach as the likelihood of YES Store use and purchase is higher among this group.

While traditional channels like large DIY stores are still the most dominant, use of RG&E's online marketplace compares favorably with ubiquitous online platforms with higher brand recognition like Amazon, especially given that the YES Store has been in operation for just around a year as of the time of this evaluation.

The key themes and DNV GL's recommendations stemming from the evaluation are summarized below (Table 11).

**Table 11: Key Themes and Recommendations**

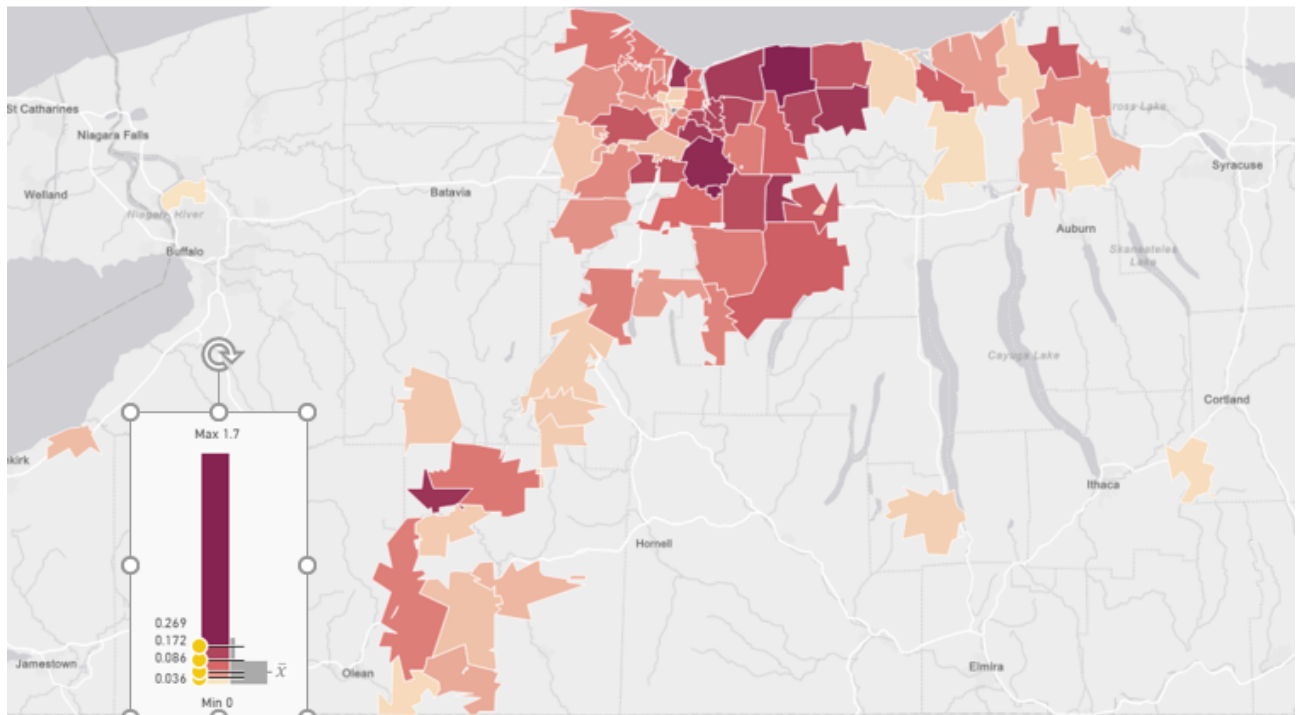
Key Theme	Implication	Recommendation
<p>1. <u>Most customers come into site via email</u></p> <p><i>"I depend on your emails to keep me informed what is new! I respect your recommendations and greatly appreciate your incentives to try something out. I hate shopping at big box stores and will always buy online as a first choice. It's great that RG&amp;E has taken the incentive to offer this added-value service to your customers."</i></p>	<p>Emails with a link directly to the YES store makes it easy.</p> <p>Postcards and bill inserts require additional effort from the customer.</p>	<p>Continue with email as the dominant outreach channel for the YES Store.</p> <p>Reduce customer effort required to respond to other channels. For example, a QR code on the bill insert that people can scan with their phone that will take them straight to the site. Track YES Store views by this and other vectors to optimize marketing effectiveness.</p>
<p>2. <u>Purchases at the YES store are higher among customers with higher levels education, income, consumption, and home ownership.</u></p>	<p>Lower-income segments are under-represented.</p>	<p>RG&amp;E could increase the traffic from this segment by creating a special promotional email that offers increased incentives or product give-aways to customers they have identified in their billing system as low income or on billing assistance</p>
<p>3. <u>A significant minority (around one-fourth) perceives prices at the YES Store to be high and indicates that the product selection could be better.</u></p> <p><i>"I have unlimited choices from Ebay, Amazon and other online retailers not just what you offer."</i></p> <p><i>"I can find whatever I need at Amazon, and it will show up in two days. It's super convenient."</i></p>	<p>It is unlikely that RG&amp;E can seriously compete on price/inventory with major retailers like Amazon or Home Depot.</p>	<p>Pursue a differentiated model than alternatives to drive traffic/sales. Periodic emails that communicate short term special deals on curated efficiency measures is an approach where RG&amp;E has a better chance to differentiate itself.</p> <p>Additionally, undertake a quarterly marketplace review of product prices and use that information to set selection and prices in the YES store to ensure that pricing will be competitive in conjunction with its special deals/promotions.</p>

Key Theme	Implication	Recommendation
4. <a href="#">Different products are purchased by customers in different zip codes.</a>	Some zip codes are more/less likely to purchase certain products.	<p>Increase purchases of products by special email promotions that target customers in specific zip codes</p> <p><a href="#">Develop and track spend metrics to gain a refined understanding of customer engagement with the YES Store.</a></p> <p>Augment CIS data with Nielsen data or similar segmentation data to develop propensity to act/purchase model to support marketing activities for the YES Store.</p>
5. <a href="#">Electricity consumption and cross-program participation increases as customers move on the spectrum from consideration to purchase.</a>	RG&E has internal data it can leverage to identify these higher propensity targets	<p>Identify these customers and regularly send emails to these customers advertising the site.</p> <p>Cross-market the site on RG&amp;E communications to these customers.</p>

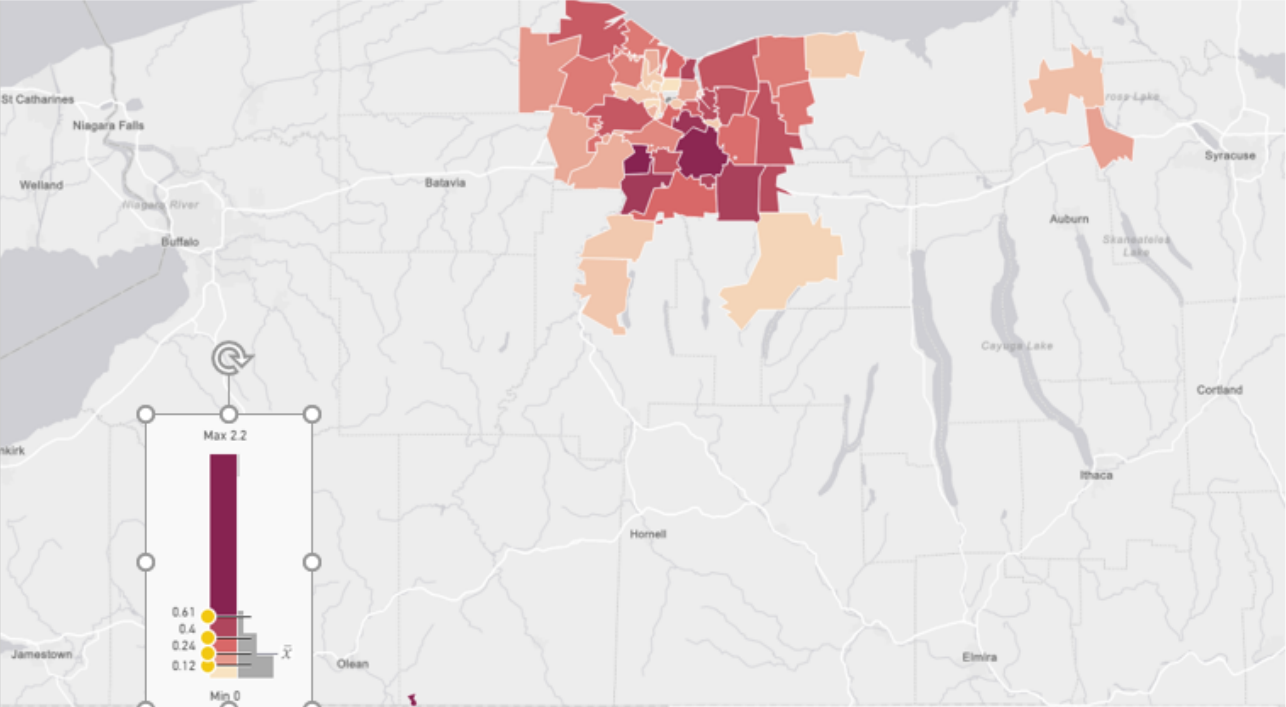
## APPENDIX. A GEOGRAPHIC TRENDS

The charts below summarize geographic trends in YES Store purchases by product category normalized by the number of households by zip.

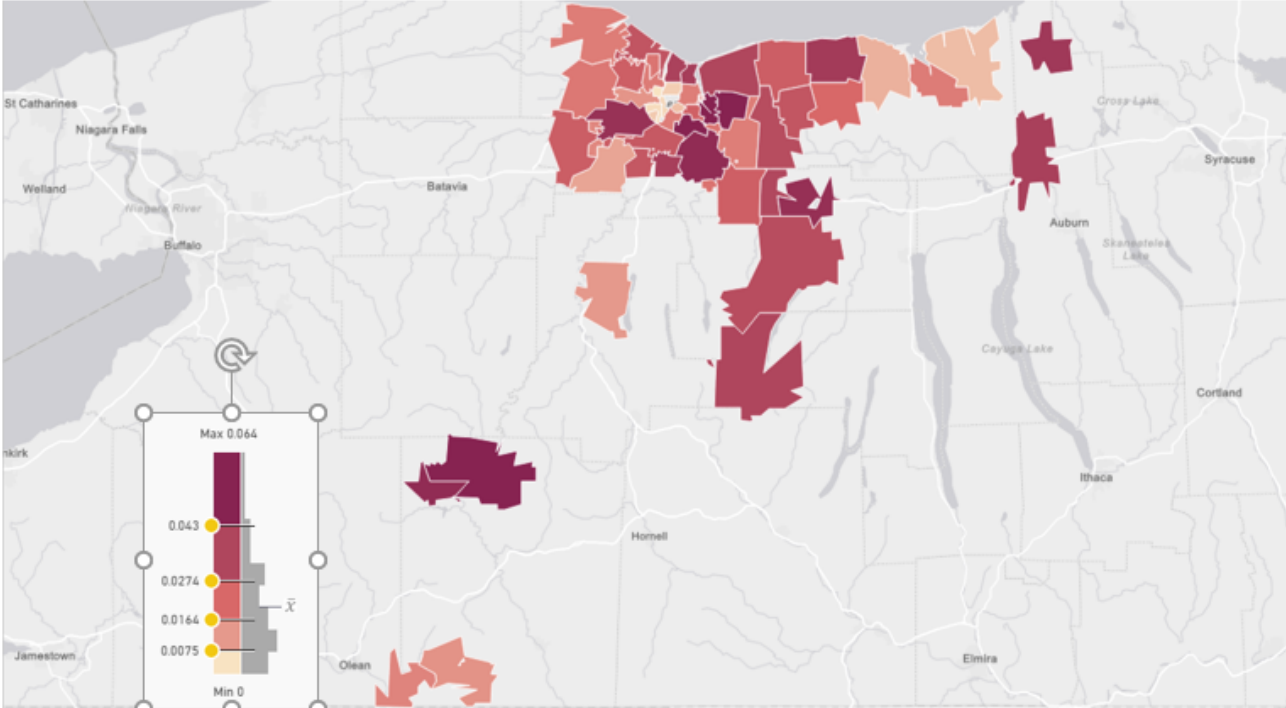
**Figure 10: Geographic trends in YES Store purchases – Lighting**



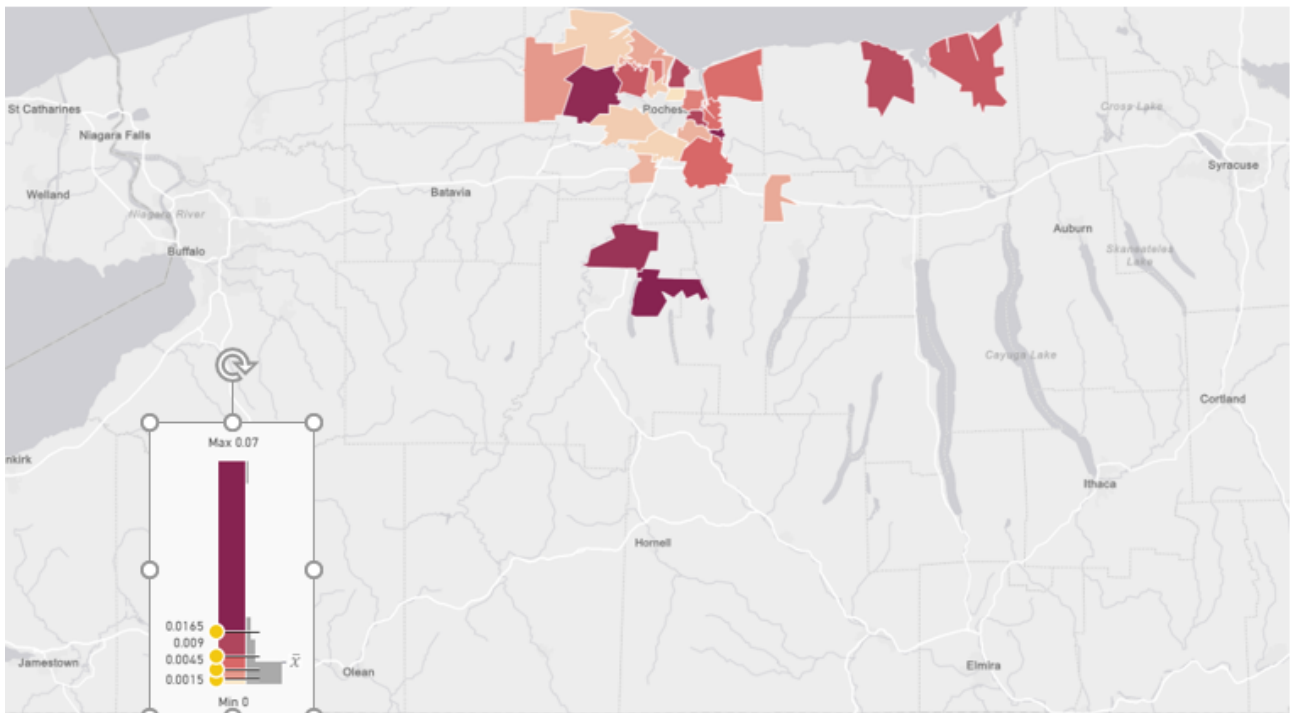
**Figure 11: Geographic trends in YES Store purchases – Smart Thermostats**



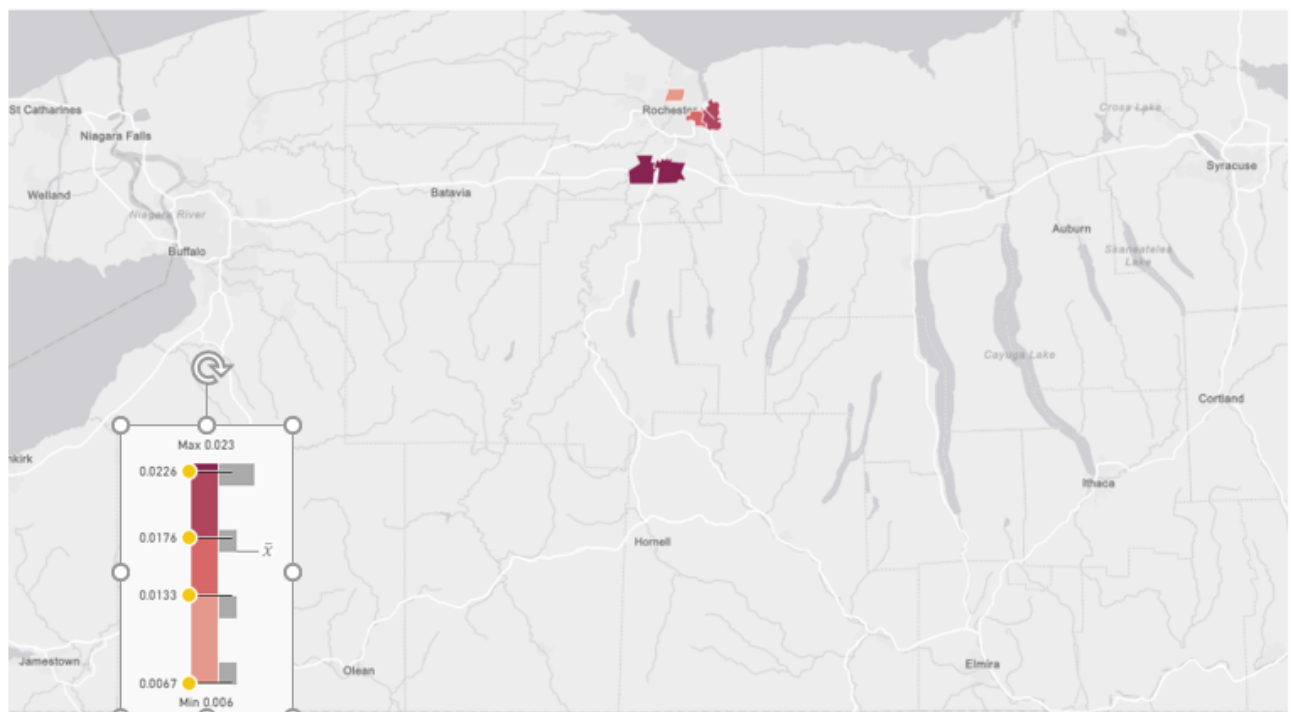
**Figure 12: Geographic trends in YES Store purchases – Advanced Power Strips**



**Figure 13: Geographic trends in YES Store purchases – Faucet Aerators**



**Figure 14: Geographic trends in YES Store purchases – Smart Devices**





## ABOUT DNV GL

Driven by our purpose of safeguarding life, property and the environment, DNV GL enables organizations to advance the safety and sustainability of their business. We provide classification and technical assurance along with software and independent expert advisory services to the maritime, oil and gas, and energy industries. We also provide certification services to customers across a wide range of industries. Operating in more than 100 countries, our 16,000 professionals are dedicated to helping our customers make the world safer, smarter and greener.